



United States
Department of
Agriculture

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Science &
Technology

Monitoring Programs Office
8609 Sudley Rd., Ste. 206
Manassas, VA 20110

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TO: See Distribution List

FROM: Martha Lamont, Director
Monitoring Programs Office

SUBJECT: Microbiological Data Program Plan, July through September 2007

This Program Plan serves as the current Statement of Work for the period July 1, 2007, through September 30, 2007, for each State participating in the Microbiological Data Program (MDP). This document also stipulates work assignments for the Federal facility participating in MDP.

I. ADMINISTRATIVE UPDATES

- A. Program Status:** Following the release of the 2007 MDP funding, sampling and testing activities resumed in April 2007. Sampling is scheduled to end September 15, 2007, with all testing activities to be completed and all sample results reported by September 30, 2007.
- B. Personnel:** Program participants are reminded to keep MDP management informed of any critical equipment purchases, staffing issues, or expected increases in rent or sample turn-around-time (e.g., due to laboratory or office renovation/relocation). This information is required under the terms of MDP Cooperative Agreements (Section II, Responsibilities) between USDA and participating States.
- C. Summary Status:** The 2006 MDP Progress Update and Data Summary was released via the Website in January 2007. The 2004 and 2005 MDP Progress Update and Data Summaries are also available on the MDP website at <http://www.ams.usda.gov/science/MPO/Download.htm>.
- D. Financial/Cooperative Agreements:** MDP Cooperative Agreements for FY 2007 were issued March 23, 2007.
- E. MDP Program Meetings:** A Federal/State Meeting to address administrative and program planning issues may be planned depending on restoration of 2008 funds for MDP. MPO will provide updates on the funding as they become available.
- F. Equipment Purchases:** MPO purchased the TEMPO[®] system for all MDP participating laboratories for enumeration of *E. coli* in all produce samples and coliform bacteria in pre-cut bagged lettuce samples.

G. Electronic Transfer of Data:

RDE Version Upgrades: A version upgrade to the Web-based RDE system was installed in April 2007 to make the data entry function for mPCR results available at all times and to increase the maximum size of the numeric value used to enumerate generic *E. coli*.

With the next version upgrade, tentatively scheduled for December 2007, MPO plans to make password management more secure, increase the size of some text fields, and fix problems reported by laboratory users. A version upgrade to the RDE e-SIF system for laptops/palmtops was distributed in January 2007. With the next version upgrade, tentatively scheduled for June 2007, MPO plans to add a feature that will allow users to dynamically activate/add commodities on the commodity look-up table. MPO maintains a change request database to capture all problems identified and suggestions made regarding the RDE system.

II. PROGRAM SAMPLING AND TESTING UPDATES

A. Sampling: Shipping Charts are distributed quarterly to Sampling Managers by MPO.

The shipping charts covering the period July 1 through September 15, 2007 are attached to this document. Cantaloupe, green onions, pre-cut (bagged) lettuce, alfalfa sprouts, and tomatoes continue. Sampling rates will be normal/regular for July and August 2007. During September 2007 sampling rates will be half sampling rates with all commodities to be collected during the first two weeks of the month.

Samples collected in Maryland will be sent to the Ohio laboratory (OH4) and those collected in Texas will be shipped to NSL (US4). Samples collected in California will be sent to the following MDP laboratories: cantaloupes and tomatoes to NSL (US4), and bagged lettuce, green onions, and alfalfa sprouts to Ohio (OH4). Cantaloupes and green onions from Florida will be shipped to Colorado. Samples from all other States will be sent to the laboratory for that collection State.

B. Testing: Cantaloupes, green onions, pre-cut (bagged lettuce), alfalfa sprouts, and tomatoes will continue. The Ohio laboratory (OH4) will analyze all samples collected by Ohio and Maryland as well as bagged lettuce, green onions, and alfalfa sprouts collected by California. NSL (US4) will analyze all samples collected by Texas and cantaloupe and tomato samples collected by California. Colorado will analyze all samples collected by Colorado and cantaloupes and green onions from Florida. All other States will analyze samples collected in that State. All testing activities are to be completed and all sample results reported by September 30, 2007.

Testing Changes: No changes in analytical testing of samples are planned.

Target Microorganisms:

- (1) *Escherichia coli* (*E. coli*): MDP laboratories test all samples for *E. coli* using the TEMPO[®] system. Method procedures are detailed in SOP MDP-MTH-01A [Enumeration of *Escherichia coli* in produce samples by TEMPO[®] EC (*E. coli*) Method, Original Version, 05/01/07]. A method verification for the TEMPO[®] system was completed by all MDP laboratories using spiked samples. The verification protocol was supplied by MPO. All laboratories began using TEMPO prior to the June 1, 2007 deadline.
- (2) Coliform Count: All laboratories test total coliform bacteria in bagged lettuce using the TEMPO[®] CC system. This method is specified in SOP MDP-MTH-01B [Enumeration of Coliform Bacteria in Produce Samples by TEMPO[®] CC (Coliform Count) System, Original Version, 05/01/07].
- (3) Pathogenic *E. coli*: MDP laboratories screen all samples for pathogenic *E. coli* according to SOP MDP-MTH-07 [Detection of Pathogenic *E. coli* in Fresh Produce by Multiplex PCR (mPCR) and Cultural Isolation and Identification, Revision 3, 05/01/07]. The mPCR assay tests for two types of pathogenic *E. coli*: (a) shiga toxin-producing *E. coli* (STEC) that carry genes coding for shiga toxins (Stx) 1 and 2 and (b) enterotoxigenic *E. coli* (ETEC) that carry genes coding for enterotoxins, heat labile (LT), and heat stable (ST) toxins.
- (4) *Salmonella*: MDP laboratories will continue to screen all samples for *Salmonella* (presence or absence) by BAX[®]. Method procedures are detailed in SOP MDP-MTH-04 (Detection of *Salmonella* in Fresh Produce by BAX[®] PCR, Revision 2, 01/01/06). Presumptive positive samples are subjected to enrichment and isolation as described in SOP MDP-MTH-03A (Isolation and Identification of *Salmonella* from Fresh Produce using Cultural Methods, Revision 1, 01/01/06).
- (5) *E. coli* O157:H7: MDP laboratories will continue to screen all samples for *E. coli* O157:H7 (presence or absence) by BAX[®]. Method procedures are detailed in SOP MDP-MTH-05 (Detection of *Escherichia coli* O157:H7 in Fresh Produce by BAX[®] PCR, Revision 2, 01/01/06). Presumptive positive samples are subjected to IMS procedures and cultural confirmation, as described in SOP MDP-MTH-06 (*Escherichia coli* O157:H7 in Fresh Produce by BAX[®] System, Revision 3, 05/01/07).

C. Quality Assurance:

Proficiency Testing Program: The next proficiency testing (PT) round will be introduced in July/August 2007. The test organism will be generic *E. coli* with testing to be performed using the TEMPO[®] EC method.

SOPs: SOPs are posted to the MDP website when distributed to program participants. Refer to: <http://www.ams.usda.gov/science/MPO/SOPs.htm>.

D. Archiving and Additional Testing:

Archival of Isolates: NSL (US4) serves as a centralized location for archival of isolates as well as a distribution center for isolates from MDP testing laboratories to the reference laboratories.

Additional Testing by Reference Laboratories: All target organisms are frozen in Microbank™ vials and shipped to NSL (US4). Vials are shipped by NSL (US4) to the FDA/Center for Veterinary Medicine (CVM) laboratory in Laurel, Maryland for antimicrobial resistance testing for inclusion in the National Antimicrobial Resistance Monitoring System (NARMS) and pulsed-field gel electrophoresis (PFGE) analysis for inclusion in PulseNet. *Salmonella* and *E. coli* O157 isolates are also serotyped by FDA/CVM. Pathogenic *E. coli* isolates are shipped by NSL (US4) to Pennsylvania State University for serotyping.

E. Transfer of Data: AMS transfers data to the Centers for Disease Control and Prevention (CDC) and FDA on a semi-annual basis.

F. Future Program Directions:

Shigella: MDP is participating in conference calls organized by the Food Emergency Response Network (FERN)/USDA Food Safety and Inspection Service (FSIS) and the Laboratory Response Network (LRN)/CDC regarding the selection and validation of a *Shigella* realtime PCR protocol. MDP plans to introduce the FERN validated protocol program wide.